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(54) Title: NOVEL *BRACHYSPIRA HYODYSENTERIAE* VACCINE

(57) Abstract: The present invention relates to nucleic acid sequences encoding a 61 kD and a 20 kD *Brachyspira hyodysenteriae* lipoprotein and to parts of such nucleic acid sequences that encode an immunogenic fragment of such lipoproteins, and to DNA fragments, recombinant DNA molecules, live recombinant carriers and host cells comprising such nucleic acid sequences or such parts thereof. The invention also relates to a 61 kD and a 20 kD *Brachyspira hyodysenteriae* lipoprotein and immunogenic parts thereof encoded by such sequences. Furthermore, the present invention relates to vaccines comprising such nucleic acid sequences and parts thereof, DNA fragments, recombinant DNA molecules, live recombinant carriers and host cells comprising such nucleic acid sequences or such parts thereof, lipoproteins or immunogenic parts thereof and antibodies against such lipoproteins or immunogenic parts thereof. Also, the invention relates to the use of said lipoproteins in vaccines and for the manufacture of vaccines. Moreover, the invention relates to the use of said nucleic acid sequences, lipoproteins or antibodies for diagnostic or vaccination purposes. Finally the invention relates to diagnostic kits comprising such a nucleic acid, lipoprotein or antibodies against such lipoprotein.